

60137-245/185-3067
Serial No. 10/781,411, filed 2/18/04

AMENDMENT

IN THE CLAIMS:

1. (Currently Amended) A mold valve assembly for a molding system, the mold valve assembly comprising:
a mold valve chamber comprising an output port, said mold valve chamber defining a first axis;
an injection chamber in communication with said mold valve chamber, said injection chamber defining a second axis transverse to said first axis;
an injection piston movable within said injection chamber, said injection piston including an end segment of said injection piston that is movable to define a portion of an inner perimeter of said mold valve chamber inner perimeter, wherein a portion of said injection piston is moveable into said mold valve chamber; and
an air-gas injection system in communication with said mold valve chamber.
2. (Currently Amended) The mold valve assembly as recited in claim 1, wherein said air-gas injection system comprises an air-gas source in communication with an air-gas inlet through said mold valve chamber.
3. (Currently Amended) The mold valve assembly as recited in claim 1, further comprising a mold valve piston movable within said mold valve chamber, wherein said mold valve piston movable within said mold valve chamber, said mold valve piston comprises a non-metallic portion between a first metallic portion and a second metallic portion.
4. (Currently Amended) The mold valve assembly as recited in claim 3, wherein said mold valve piston is selectively movable to block an air-gas inlet through said mold valve chamber.
5. (Original) The mold valve assembly as recited in claim 4, wherein said mold valve piston scrapes said end segment as said mold valve piston moves toward said an output port.

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6. (Currently Amended) A molding system comprising:
a mold assembly which defines a mold cavity;
a mix head assembly selectively mountable to said mold assembly;
~~a said mold valve assembling assembly~~ including a mold valve chamber in communication with an injection chamber and an injection piston movable within said injection chamber, wherein said injection piston includes an end segment that is movable to define a portion of an inner perimeter of said mold valve chamber, and a portion of said injection piston is moveable into said mold valve chamber; and
an ~~air~~ gas injection system in communication with said mold valve assembly to selectively inject ~~air~~ gas into said mold cavity through said mold valve chamber of said mold valve assembly.
7. (Currently Amended) The molding system as recited in claim 6, ~~further comprising a~~ wherein said mix head assembly is in communication with said mold valve assembly.
8. (Original) The molding system as recited in claim 7, further comprising a feed assembly in communication with said mix head assembly.
9. (Currently Amended) The molding system as recited in claim 6,
wherein ~~said mold valve assembly comprises:~~
~~—said mold valve chamber comprising comprises~~ an output port, said mold valve chamber defining a first axis; and
wherein said injection chamber in communication with said mold valve chamber, said injection chamber defining defines a second axis transverse to said first axis; and
~~—an injection piston movable within said injection chamber, an end segment of said injection piston movable to define a portion of a mold valve chamber inner perimeter.~~
10. (Currently Amended) The molding system as recited in claim 9, wherein said ~~air~~ gas injection system communicates with said mold valve chamber, in response to a position of a mold valve piston movable within said mold valve chamber.

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11. (Withdrawn) A method for injecting matrix into a mold assembly through a mold valve assembly comprising an injection chamber and mold valve chamber, the method comprising the steps of:

- (a) injecting a mixture material into the mold assembly through the injection chamber and the mold valve chamber;
- (b) driving the mixture material into the mold valve chamber with a first piston;
- (c) driving the mixture material from the mold valve chamber into the mold assembly with a second piston;
- (d) curing the mixture material to form a cured article within the mold assembly;
- (e) retracting the second position to an ejection position; and
- (f) injecting air through the mold valve chamber into the mold assembly between the cured article and the mold assembly.

12. (Withdrawn) A method as recited in claim 11, further comprising the step of:
orienting an axis defined by the first piston transverse to a second axis defined by the second piston.

13. (Withdrawn) A method as recited in claim 11, further comprising the step of:
locating the second piston at an injection position prior to said step (a).

14. (Withdrawn) A method as recited in claim 13, wherein said step (e) comprises:
retracting the second piston past the injection position.

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15. (Currently Amended) The ~~molding system~~ mold valve assembly as recited in claim 1, further including a gas source, wherein air-gas is selectively injected into said mold cavity from a gas source in response to movement of said mold valve piston within said mold valve chamber after a molded article has cured within a mold cavity.
16. (Currently Amended) The molding system as recited in claim 69, wherein said mold valve piston comprises a non-metallic portion between a first metallic portion and a second metallic portion, and said non-metallic portion definition-defines an interference fit within said mold valve chamber.
17. (Currently Amended) The molding system as recited in claim 69, wherein air-gas is selectively injected into said mold cavity from a gas source in response to movement of said mold valve piston within said mold valve chamber after a molded article has cured within ~~the~~ said mold cavity.
18. (New) The mold valve assembly as recited in claim 1, wherein said gas injection system is an air injection system.
19. (New) The mold valve assembly as recited in claim 1, wherein said end segment includes an arcuate segment.
20. (New) The molding system as recited in claim 6, wherein said gas injection system is an air injection system.
21. (New) The molding system as recited in claim 6, wherein said end segment includes an arcuate segment.